

CLAIMS

I claim:

1. An isolated nucleic acid molecule, comprising (a) a eukaryotic promoter, (b) a nucleotide sequence encoding a type II signal anchor domain segment, and (c) a cloning site, wherein the isolated nucleic acid molecule comprises elements (a) to (c) in a 5' to 3' order.

2. The isolated nucleic acid molecule of claim 1, consisting of (a) a eukaryotic promoter, (b) a nucleotide sequence encoding a type II signal anchor domain segment, and (c) a cloning site, wherein the isolated nucleic acid molecule comprises elements (a) to (c) in a 5' to 3' order.

3. The isolated nucleic acid molecule of claim 1, further comprising a nucleotide sequence that encodes a spacer peptide, wherein the spacer peptide-encoding nucleotide sequence resides between the nucleotide sequence encoding the type II signal anchor domain segment and the cloning site, and wherein the spacer peptide comprises at least ten amino acids.

4. The isolated nucleic acid molecule of claim 3, further comprising a nucleotide sequence that encodes an affinity tag, wherein the affinity tag-encoding nucleotide sequence resides between the nucleotide sequence encoding the type II signal anchor domain segment and the cloning site.

5. The isolated nucleic acid molecule of claim 1, further comprising a nucleotide sequence that encodes an affinity tag, wherein the affinity tag-encoding nucleotide sequence resides between the nucleotide sequence encoding the type II signal anchor domain segment and the cloning site.

6. The isolated nucleic acid molecule of claim 1, further comprising a nucleotide sequence that encodes an intron, wherein the intron-encoding nucleotide sequence resides between the promoter and the nucleotide sequence encoding the type II signal anchor domain segment.

7. The isolated nucleic acid molecule of claim 1, further comprising at least one sequence selected from the group consisting of (a) a translation termination sequence, (b) a polyadenylation signal sequence, and (c) a transcription termination sequence.

8. The isolated nucleic molecule of claim 7, comprising at least two of sequences (a) to (c), wherein the sequences reside in the following 5' to 3' order: translation termination sequence, polyadenylation signal sequence, and transcription termination sequence.

9. The isolated nucleic molecule of claim 8, comprising three sequences (a) to (c), wherein the sequences reside in the following 5' to 3' order: translation termination sequence, polyadenylation signal sequence, and transcription termination sequence.

10. An expression vector, comprising the isolated nucleic acid molecule of claim 1.

11. An isolated nucleic acid molecule, comprising (a) a eukaryotic promoter, (b) a nucleotide sequence encoding a type II signal anchor domain segment, and (c) a gene or gene fragment, wherein the isolated nucleic acid molecule comprises elements (a) to (c) in a 5' to 3' order, wherein the gene or gene fragment resides in-frame with the nucleotide sequence that encodes the type II signal anchor domain, and wherein the nucleotide sequence that encodes a type II signal anchor domain segment is heterologous with respect to the gene or gene fragment.

12. An isolated nucleic acid molecule, consisting of (a) a eukaryotic promoter, (b) a nucleotide sequence encoding a type II signal anchor domain segment, and (c) a gene or gene fragment, wherein the isolated nucleic acid molecule comprises elements (a) to (c) in a 5' to 3' order, wherein the gene or gene fragment resides in-frame with the nucleotide sequence that encodes the type II signal anchor domain, and wherein the nucleotide sequence that encodes a type II signal anchor domain segment is heterologous with respect to the gene or gene fragment.

13. The isolated nucleic acid molecule of claim 11, further comprising a translation termination sequence, which resides in a 3' position relative to the gene or gene fragment.

14. The isolated nucleic acid molecule of claim 12, wherein the translation termination sequence resides within the gene or gene fragment.

15. The isolated nucleic acid molecule of claim 14, further comprising a polyadenylation signal sequence, wherein the polyadenylation signal sequence is located 3' to the translation termination sequence.

16. The isolated nucleic acid molecule of claim 15, wherein the polyadenylation signal sequence resides within the gene or gene fragment.

17. The isolated nucleic acid molecule of claim 15, further comprising a transcription termination sequence, wherein the transcription termination sequence resides in a 3' position relative to the polyadenylation signal sequence.

18. The isolated nucleic acid molecule of claim 17, wherein the transcription termination sequence resides within the gene or gene fragment.

19. An expression vector, comprising the isolated nucleic acid molecule of claim 11.

20. The expression vector of claim 19, further comprising an affinity peptide encoding region.

21. The expression vector of claim 20, wherein the affinity peptide encoding region is located between the nucleotide sequence that encodes the type II signal anchor domain segment and the gene or gene fragment.

22. The expression vector of claim 19, further comprising a nucleotide sequence that encodes a spacer peptide, wherein the spacer peptide-encoding nucleotide sequence resides between the nucleotide sequence encoding the type II signal anchor domain segment and the gene or gene fragment, and wherein the spacer peptide comprises at least ten amino acids.

23. The expression vector of claim 19, further comprising at least one selectable marker gene.

24. The expression vector of claim 19, further comprising at least two origins of replication, wherein one origin of replication facilitates replication in an expression cell type, and wherein a second origin of replication facilitates replication in an amplification cell type, and wherein the expression cell type is eukaryotic and the amplification cell type is prokaryotic.

25. A recombinant host cell, comprising either the expression vector of claim 19, or a nucleic acid molecule cassette, wherein the nucleic acid molecule cassette comprises (a) a promoter, (b) a nucleotide sequence encoding a type II signal anchor domain segment, and (c) a cloning site, wherein the nucleic acid molecule cassette comprises elements (a) to (c) in a 5' to 3' order.

26. The recombinant host cell of claim 25, wherein the host cell is selected from the group consisting of mammalian cell, insect cell, avian cell, and fungal cell.

27. A recombinant host cell, comprising the expression vector of claim 19.

28. A kit comprising the isolated nucleic acid molecule of claim 1.

29. A kit comprising the expression vector of claim 10.